

# Work Order ID 110388

December-17-13 1:35:38 PM

**\*110388\***

Page 1

Item ID: D2435 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Bearpaw  
 Start Date: 12/17/13 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 12/31/13 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: MLS Date: 12-12-17 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2435	Rev E1								
120	FLOW WATER JET	0.00							
<b>*120*</b>									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	CUT BLANK AS PER FILE D2435								
<u>Ummu 1"</u>									
130	HAAS CNC VERTICAL MACHINING #1	0.00							
<b>*130*</b>									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1									
	1-Inspect material for defects or damage prior to machining								
	2-Machine as per Folio FA789 and Dwg D2435 Identify as D2435								
	3-Deburr								
140	QC2- Inspect parts off machine FAI/FAIB	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									

4 0 Ac  
14-02-22

4 0 MH 14/03/07

4 0 MH 14/03/07

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 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC8- Inspect parts - second check	0.00							
<b>*150*</b>						3			
QC	Memo	0.00							
Quality Control									
151	Identify as per dwg & Stock Location: _____	0.00							
<b>*151*</b>									
Packaging	Memo	0.00							
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
<b>*190*</b>									
QC	Memo	0.00							
Quality Control									

DAS  
27  
9-89  
M/3/12

→  
PCTO  
Rec'd 3/12 (3)

MCS 14-03-13

ME  
4-3-12

# Picklist Print

December-17-13 1:35:42 PM

Page 1

Work Order ID: 110388

\*110388\*

Parent Item: D2435

\*D2435\*

Parent Item Name: Bearpaw

Start Date: 12/17/13

Required Date: 12/31/13

Start Qty: 4.00

Required Qty: 4.00

## Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			120	sf	745.0282	3.2	13			

**\*MIJHMWB10\***

UHMW 1" Black - 48"x120"

Tivar Mfg.#52480104

\*\*

MI28267 → 13

Ac 14-02-22

### Location

### Loc Qty

### Loc Code

MAT018

745.0281795

121278

9.62817947

122575

47.6

123229

53

123704

63.8

123949

6.96

124382

197.12

124758

17.52

125137

170.4

m126748

6

m127491

173

DQA:

Date: 14/03/14



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: 14/3/14

Work Order update only ☐

Work Order: 110388	<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input checked="" type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>			
Part No. D2435		Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
NCR No. 14-825		Machining <input checked="" type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>
		Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	14.03.12	130	1	CMF ON POCKET IS 0.165 X 45°	A.P.	SCRAP, LOOKS BAD.	14/03/12	DAS 27 9-89 14/3/12	DAS 27 9-89 14/3/12
Doc/Data					14.03.12				
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

## FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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DART AEROSPACE LTD		Work Order:	110388
Description: Bearpaw		Part Number:	D2435
Inspection Dwg: D2435 Rev: E1		Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	.070 x 45°	✓		FK-08	Caliper
B	5.500	+/-0.030	5.506	✓			
C	0.200	+/-0.030	.196	✓			
D	R0.250	+/-0.030	.250	✓		rad gauge	-
E	0.250	+/-0.010	.260	✓		FK-08	Caliper
F	0.625	+/-0.030	.635	✓			
G	0.25 x 45°	+/-0.030	.26 x 45°	✓			
H	0.375	+/-0.010	.383	✓			
I	19.000	+/-0.030	19.00	✓		MH-07	tape
J	0.950	+0.030/-0.010	.963	✓		FK-08	Caliper
K	Ø0.260	+0.005/-0.000	.260	✓			
L	Ø0.930	+/-0.030	.931	✓			
M	0.30	+0.030/-0.000	.305	✓			
N	0.375	+/-0.030	.385	✓			
O	7.375	+/-0.030	7.378	✓			
P	4.250	+/-0.010	4.249	✓			
Q	2.000	+/-0.030	2.015	✓			
R	9.000	+/-0.010	9.003	✓		Cnc-02	caliper
S	15.750	+/-0.030	15.75	✓		MH-07	tape

Measured by: MH	Audited by: DAS	Prototype Approval:	N/A
Date: 14/03/07	Date: 14/3/07	Date:	

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O K10007	KJ/RF	

El	02.12.17	φ0.93 WAS φ0.75	RE
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98-06-17 KE

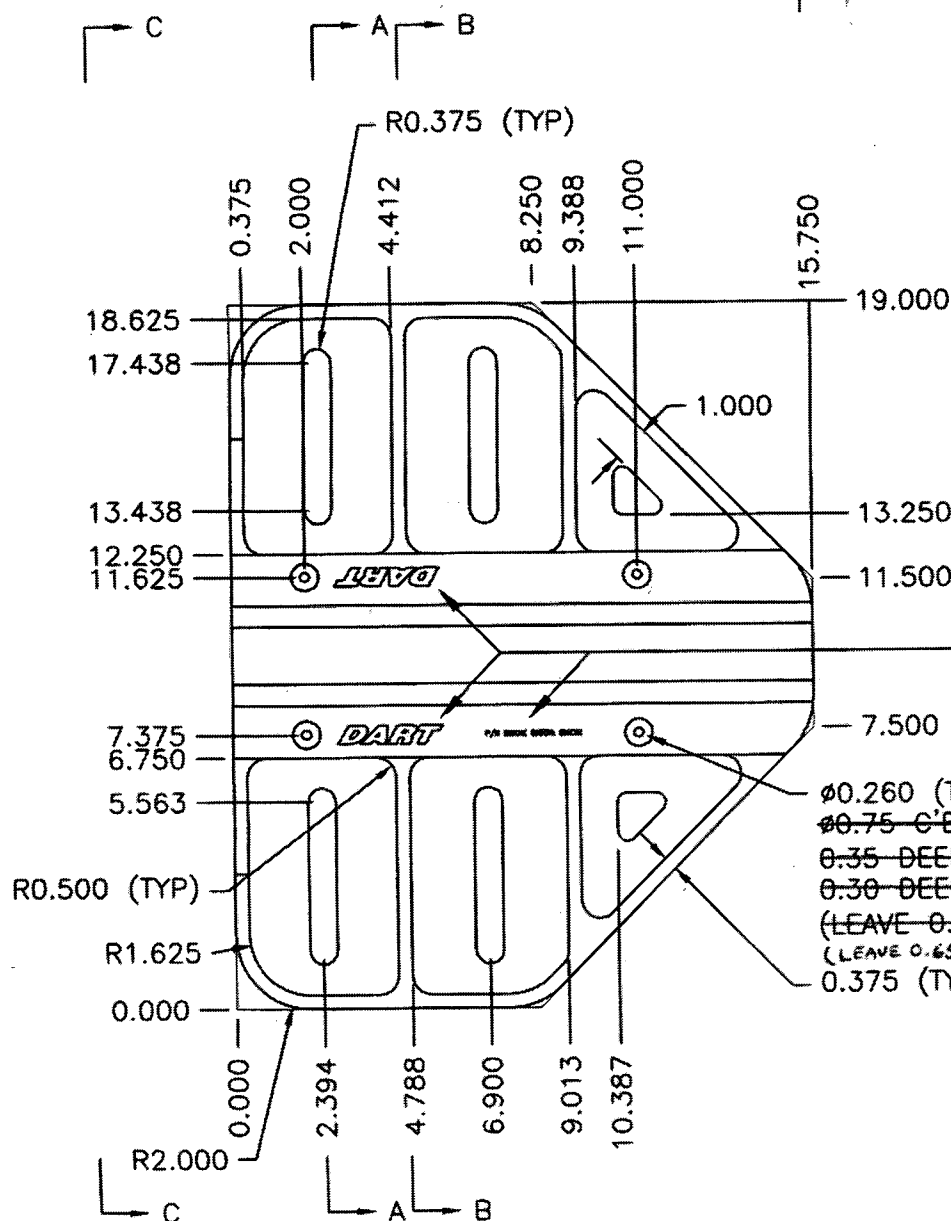
**DART**



110388  
MLJ  
13-12-17



DESIGN	UNKNOWN BY	DRAWING NO. D2435	REV. E
KE	KE		
CHECKED	APPROVED	SHEET 1 OF 2	SCALE
MB	JS		
DATE		TITLE	
98.05.19		BEARPAW	1:5
A	96.01.24	NEW ISSUE	
B	96.03.26	CHANGE BORE AND C'BORE DEPTH	
C	97.05.07	CHANNEL & C'BORE DEPTH CHANGED	
D	97.10.17	R1.5 BORE WAS R2.637 (TSR A469)	
E	98.05.19	CHANGE C'BORE, R1.58 WAS R1.50	

ENGRAVE LOGO TO MAX  
DEPTH OF 0.012. ENGRAVE  
PART AND BATCH NUMBERS  
TO MAX DEPTH OF 0.010.  
(TYPICAL LOCATION AS  
ILLUSTRATED)



~~Ø0.260 (TYP) Ø0.93 C'BORE~~  
~~Ø0.75 C'BORE 0.30 DEEP FROM BOTTOM~~  
~~0.35 DEEP FROM TOP (MIN.)~~  
~~0.30 DEEP FROM BOTTOM.~~  
~~(LEAVE 0.300 MIN.)~~   
~~(LEAVE 0.650 MIN.)~~  
~~0.375 (TYP)~~ 

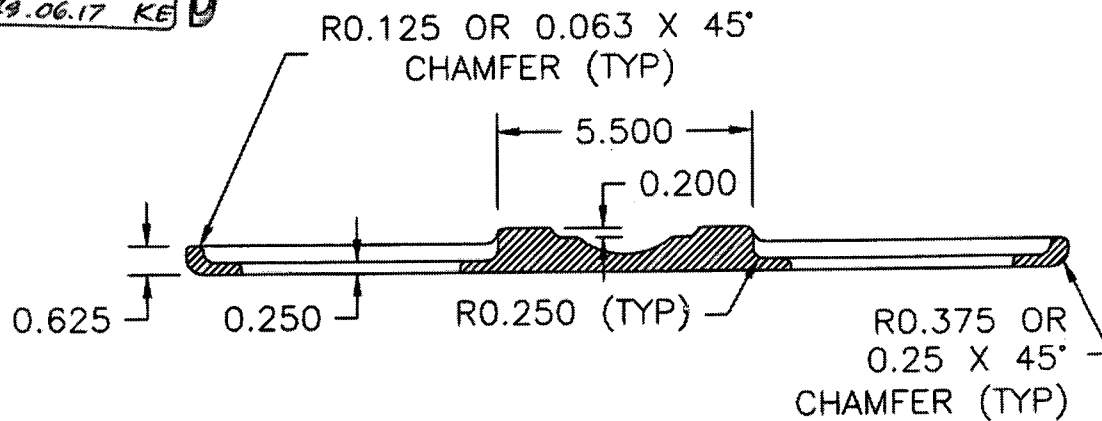
MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689  
1.00 THICK (MACHINE TO 0.950)

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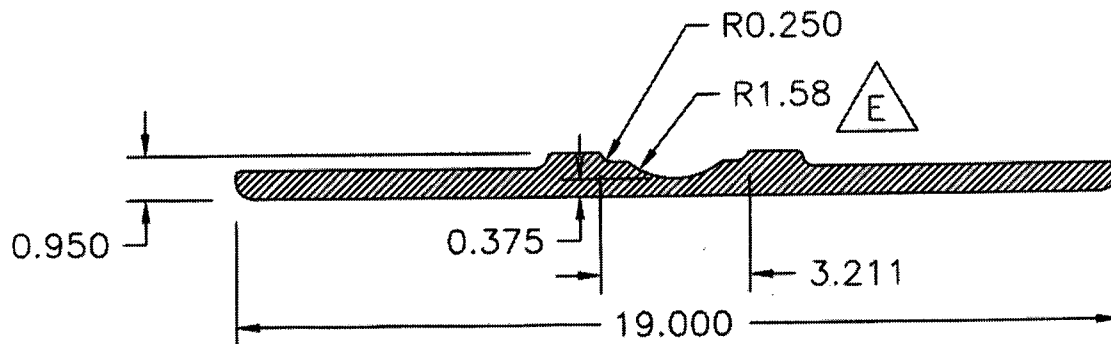


DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>DM</i>	APPROVED <i>KE</i>	DRAWING NO. D2435	REV. E SHEET 2 OF 2
DATE 98.05.19		TITLE BEARPAW	SCALE 1:4

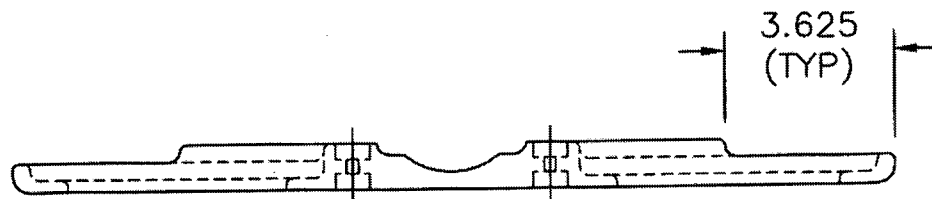
RELEASED  
98.06.17 KE



SECTION A-A



SECTION B-B



SECTION C-C